UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
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AUG 8 2011

Brian Davidson
Interdisciplinary Team Leader
U.S. Department of Agriculture
Forest Service
Mark Twain National Forest
401 Fairground Road
Rolla, Missouri 65401

RE: Draft Environmental Impact Statement for the Integrated Non-native Invasive Plant Control Project for the Mark Twain National Forest, CEQ #20110189

Dear Mr. Davidson:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Integrated Non-native Invasive Plant Control Project (the project). Our review is provided pursuant to the National Environmental Policy Act (NEPA) 42 U.S.C. 4231, Council on Environmental Quality (CEQ) regulations 40 C.F.R. Parts 1500-1508, and Section 309 of the Clean Air Act (CAA). The DEIS was assigned the Council on Environmental Quality (CEQ) number 20110189.

The United States Department of Agriculture, Forest Service (Forest Service) proposes to implement an integrated management strategy to control the spread of non-native invasive plant species (NNIP) within Mark Twain National Forest (MTNF) over the next 10 years or until circumstances change which would affect the validity of the analysis. There are currently 32 species of NNIP currently inventoried by the Forest Service which infest approximately 32,428 acres of the total 1,497,847 acres of MTNF or about 2.2% of managed forest. The MTNF is located in parts of 29 Missouri counties west and southwest of St. Louis, Missouri. The DEIS provides an analysis of the impacts associated with the implementation of an integrated program for the prevention, suppression, reduction and eradication of existing and future NNIP. This analysis considers 3 alternatives, including a no action alternative and two action alternatives which employ an assortment of NNIP control strategies. Control strategies include manual, mechanical, chemical, cultural and biological treatments. Of the two action alternatives, Alternative 2 serves as the Forest Service's preferred alternative and would employ all treatment types, including herbicide treatment on 0.2% of total MTNF acreage. Alternative 3 would utilize all treatment methods except chemical, i.e., no herbicides, and would exclude 3 of the 7 biological control agents proposed.

EPA supports the Forest Service's efforts to prevent the introduction of and control and eradication of NNIP from the MTNF. From our review of the DEIS, the proposed project

appears well structured with protective treatment safeguards. However, based on our overall review of the DEIS and the level of our comments, EPA has rated the DEIS for this project EC-2 (Environmental Concerns-Insufficient Information). EPA's detailed comments on aspects of the DEIS and a copy of EPA's rating descriptions are provided as enclosures to this letter. This EC-2 rating focuses on the document itself and is based on the absence of a comprehensive and organized discussion of past, current and future land management practices within the MTNF which could influence the risk of both the introduction and expansion of NNIP, insufficient information supporting decisions regarding the most effective method or combination of methods for NNIP treatment and eradication across the variety of land forms and soils in the MTNF, particularly with regard to herbicides, and the insufficient presentation of the potential for impacts to sensitive or vulnerable water resources from sediment and herbicide runoff potentially arising from the implementation of control methods. In general, the DEIS contains a great deal of information, but is poorly organized and relies too much on references to MTNF websites and other documents to support its analysis in this document. This is particularly true of Chapter 3 which discusses the affected environment and environmental consequences of the project in the context of individual resource components. The combination of analyses of the affected environment and the environmental consequences of the project into one chapter (Chapter 3) might have impaired the clarity and effectiveness of the DEIS. In addition, the document would be improved with the addition of a table or listing of the many acronyms used throughout the summary document and the DEIS.

As reflected in our enclosed issue-specific comments, we suggest that the Final EIS include within its assessment of the affected environment an assessment of past, current and future land management practices within the MTNF which could have contributed to the introduction and spread of NNIP as well as what potential changes to the Forest Service's land management planning could prevent the introduction, expansion or reintroduction of NNIP into the MTNF. In addition, we suggest that the Final EIS include a GIS-based mapping of specific forest units or smaller watersheds within the MTNF for which one method or combination of methods of treatment or removal is best suited using data such as is provided by the NRCS' WIN-PST3 model. Although this model was developed to address the potential for herbicide runoff or leaching, the parameters upon which the model is based could also assist in describing the suitability of different soils and land forms for other methods of NNIP control. Finally, the identification of sensitive aquatic resources within the MTNF and in areas outside of the MTNF boundaries and also waters potentially vulnerable to herbicide runoff or leaching or to runoff from surface disturbance would strengthen the discussion of potential water quality effects. More detailed comments regarding these suggestions are included in an enclosure to this letter.

As the preferred alternative provides for the use of pesticides for the control of NNIP in lakes, ponds and wetlands within the MTNF, please be aware that a National Pollutant Discharge Elimination System (NPDES) permit is now required for discharges to waters of the United States from the application of pesticides. The Missouri Department of Natural Resources (MDNR) is the permitting authority for affected waters within Missouri and should be contacted well in advance of the implementation of the project. Current information on EPA's general permit for discharges from the application of pesticides is available at www.epa.gov/npdes and on MDNR's discharge permitting program at www.dnr.mo.gov/env/wpp/permits/pesticide. The Final EIS should address this new regulatory requirement and describe how the Forest Service

will coordinate with the MDNR prior to implementation of the project. Given the 10 year implementation period of this project, we recommend that you regularly monitor the regulatory status of any herbicides used for NNIP control in the MTNF for changes in labeling.

We appreciate the opportunity to provide comments regarding this project. If you have any questions or concerns regarding this letter, please contact Joe Cothern, NEPA Team Leader, at (913) 551-7148 or cothern.joe@epa.gov, or Larry Shepard, NEPA Reviewer, at (913) 551-7441 or shepard.larry@epa.gov.

Sincerely,

Ronald Hammerschmidt, Ph.D.,
Director
Environmental Services Division

Enclosures

U.S. Environmental Protection Agency
Detailed Comments- Integrated Non-native Invasive Plant Control Project Draft EIS

Land Management Practices Contributing to Non-native Plant Species Invasions

The purpose of the proposed project is "to protect and restore naturally functioning native ecosystems on the Forest by controlling current and future threats of NNIP infestations." A comprehensive analysis of past and current land management practices both surrounding and within the MTNF provides the context for the present condition and extent of NNIP infestations in the Forest and the likelihood for success for the proposed project. Without recognition and analysis of the route of NNIP introductions into the MTNF and the management practices which provide for the proliferation of non-native species, the control and eradication of existing populations and the prevention of future infestations could be ineffective.

Non-native species introductions occur frequently throughout almost all native ecosystems. Non-native species become invasive typically in response to both natural and anthropogenic disturbance of or stresses to the native ecosystem, e.g., fire, drought, climate change, species introductions, trails, roadways, forest harvest, recreational uses, air and water pollution. The DEIS should characterize what past, and possibly continuing, disturbances or stresses to the natural forest ecosystem provided the opportunity for non-native species to flourish in the MTNF and how the FS has responded in its management approach. Continuing stress to the ecosystem will impede project success and will limit the project to solely reactive methods. Although Chapter 2 specifically states that "prevention and education are not a part of this NNIP control project because these activities are incorporated into the day-to-day activities of the MTNF" (page 26), the assessment of historic and existing management practices within the MTNF which could have both introduced new infestations and created an environment conducive to expansion of these invaders is critical to the completeness of this DEIS. Although we could not find specific reference to potential sources of introduction or causes of infestation in either the 2005 Forest Plan or its accompanying Final EIS, the Final EIS supporting the NNIP control project should incorporate any pertinent information regarding these issues from these documents into its baseline assessment of NNIP infestation in the MTNF. The DEIS' dismissal of prevention as an important component of this NNIP control project and its only general treatment in the 2005 Forest Plan creates a gap in the ability of this project to fully address the objective of this program which is cited multiple times throughout the document and specifies "***prevention***, eradication, suppression, and reduction of existing and future NNIP infestations …within the Mark Twain National Forest boundaries [**emphasis added**]."

Assessment of Soils and Landforms Suitability

The soils and watersheds descriptions provided in Chapter 3 highlight the diversity of soils and land forms within the MTNF. The DEIS describes thin soils resting on bedrock, thick soil in valleys, loess, gravel, rock fragments, rolling lowlands, deeply dissected uplands, steep slopes, bluff lands, ridge tops and alluvial valleys. The DEIS characterizes the diversity of geology and geography across the MTNF's 1.4 million acres. The wide spectrum of diverse substrate and land forms will affect the utility and effectiveness of control methods. Which control methods are suitable for each location within the MTNF is determined both by the methods themselves and

character of the local environment. The Project Design Criteria reflect some of these considerations, but the presentation of these considerations in the DEIS could be made more clear. In general, the DEIS would be greatly improved if it included maps documenting surface features, including land forms, surface waters, roads, trails for motor vehicles, clear cuts, fire sites, old fields and major NNIP infestation locations, which are pertinent to the management of the MTNF and, specifically, to the management of this project. There is a great deal of material within the DEIS which could be presented more effectively using mapping tools.

In general, the DEIS includes no high quality maps and no GIS-based characterizations of the Forest's physical resources nor does it discuss how these resources influence the effectiveness or the environmental suitability of each treatment method. For example, the DEIS states that data generated by the NRCS' WIN-PST3 modeling analysis of soil and herbicide interactions "cannot be easily summarized and displayed in this document." However, a map showing herbicide suitability as well as areas within the MTNF with thin soil cover, shallow depth to groundwater, erodible soils, proximity to surface water or sink holes and sharp relief overlain by areas of extensive NNIP infestation would more effectively communicate to the decision-maker and the public how the FS will implement all components of its control project within each management unit under the provisions of the 2005 Land and Resource Management Plan's Standards and Guidelines and the project's design criteria. Although WIN-PST3 specifically models soil-herbicide interaction, the data entered into this model, in combination with other geographical data, can be mapped and better identify for the decision-maker and the public the basis for determining which control and eradication methods are suited to specific areas within the operational units of the MTNF. Chapter 2 references such resources as being available on the MTNF website, but the absence of any such displays or information within the DEIS hampers the review of the document.

As a minor matter, please verify that one of the soil factors included in the discussion of the WIN-PST3 model should be 'macropores' rather than 'macrospores' in the soil surface horizon.

Water Quality Assessment and Risks to Aquatic Life

There is an adequate amount of toxicity data related to the herbicides proposed for use under the preferred alternative, but no characterization of aquatic resources within the MTNF or adjacent waters under hydrologic influence of MTNF waters. The DEIS would be greatly improved if MTNF surface waters and connected neighboring waters were mapped and described as to federal or state protective designations and unique ecological features. This inventory and mapping would include wetland types, lakes, ponds, cool and cold water streams and losing streams. In addition, for waters with known water quality problems, the DEIS should identify the cause of those problems and whether the proposed methods of NNIP treatment could exacerbate those water quality problems. This information would identify for the public those MTNF resources which must receive special attention by the Forest Service in the implementation of the project. Specifically, those lakes, ponds or wetlands which will be treated for NNIP should be identified, including the NNIP species being treated and the treatment method considered.

Draft Environmental Impact Statement Rating Definitions

Environmental Impact of the Action

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative. EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess

environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.